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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,922	03/08/2002	Takayuki Sano	50233-097	1295

7590 08/07/2003

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EXAMINER
RODEE, CHRISTOPHER D

ART UNIT	PAPER NUMBER
1756	7

DATE MAILED: 08/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/092,922	SANO ET AL.	
	Examiner	Art Unit	
	Christopher D RoDe	1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period f r Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 July 2003 and 16 July 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-7 and 9-12* is/are rejected.

7)☒ Claim(s) *8 and 13* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Remarks

Applicant's recent amendments in the responses of 9 July 2003 and 16 July 2003 have overcome the rejections applied in the last Office action. New art has been discovered that requires a new grounds of rejection.

Claim Rejections - 35 USC § 103

Claims 2, 3, 5-7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arai in US Patent Publication 2001/0053491.

Arai discloses an MICR toner that comprises a binder resin, magnetic powder, a wax, and metal oxide particles (Abstract; ¶¶ [0059], [0073], [0125], & [0182]). As seen in Figure 1, the toner contains a mixture of first needle-shaped magnetic powder **8** and a second granular magnetic powder **9** (¶¶ [0092] & [0127]). Magnetic powders to be used in the MICR toner include iron oxide, identified as magnetite (¶ [0075]). The magnetic powders comprise a first magnetic powder having a residual magnetization of 25 to 38 emu/g and a saturation magnetization of 80 to 85 emu/g, and a second magnetic powder having a residual magnetization of 5 to 23 emu/g and a saturation magnetization of greater than 85 emu/g to 90 emu/g (¶¶ [0083] & [0088]). The magnetic powders are contained in the toner in an amount of 1 to 60, preferably 40 to 60 parts by weight per 100 parts by weight of the binder resin (¶ [0115]). The ratio of the first and second magnetic powders is from 100 parts by weight of the first powder to 10-1000 parts by weight of the second powder (¶ [0118]), preferably 100 parts of the first powder to 50 to 300 parts of the second powder (¶ [0120]). Control of the residual and saturation magnetization as well as the material amounts of these components permits the

artisan to control the magnetic properties of the MICR toner (¶ [0089]). Waxes for use in the toner include polyethylene wax, polypropylene wax, and Fischer-Tropsch wax (¶ [0184]). Arai states that a mixture of charge control agents is usefully added to the toner (¶ [0188]).

Example 1 presents a toner having a combination of first and second magnetic powders having magnetic characteristics as shown in Table 3 (p. 14). These values for the needle-shaped (acicular) iron oxide magnetic powder and the granular iron oxide magnetic powder fall within the scope of the instant claims. These powders are contained in equal amounts and constitute 40 parts by weight of the toner. It appears that the iron oxide powders in this example are magnetites because "iron oxide" is identified in ¶ [0075] as magnetite for purposes of the disclosure. A binder resin in an amount of 100 parts by weight and a Fischer-Tropsch wax in an amount of 2.5 parts by weight are added to the toner composition. The total amount of magnetic powder is present in amount of 28 % by weight based on this evidence. The exemplified Fischer-Tropsch wax on the example appears to meet the requirements of a Fischer-Tropsch wax derived from natural gas because it is a Fischer-Tropsch wax that appears to give the requisite prevention of offset identified in the specification as a property of Fischer-Tropsch wax derived from natural gas (spec. p. 10). The toner is mixed with 1.0 parts by weight of a hydrophobically treated silica. This treatment includes treatment with silicone oil (¶¶ [0306] & [0310]).

Although the reference does not identically disclose the combination of magnetite having the exemplified characteristics with the ratio of granular to acicular particles as claimed, the reference does teach that the magnetic characteristics of the granular to acicular and the relative amounts of these materials permit the artisan to control the magnetic characteristics of the MICR toner. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the needle-shaped magnetic iron oxide powder and the granular

magnetic iron oxide powder within the general disclosure or in those of Example 1 in a ratio of 100 to 1000 (i.e., .1 to 1.0) or 100 to 300 (i.e., .33 to 1.0) because these are specifically identified values useful for the MICR toner. Additionally, the reference teaches the relative amounts of the components permit the artisan to tailor the magnetic characteristics of the toner. The artisan would recognize the amounts of the magnetic powder as result effective and would optimize these amounts to obtain the results of the invention.

Applicant cannot rely upon the foreign priority papers to overcome this rejection and those rejections that follow of Arai because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arai in US Patent Publication 2001/0053491 as applied to claims 2, 3, 5, and 7 above, and further in view of Hashimoto in US Patent 6,465,144.

Arai was described above. This reference does not disclose the DSC melting point of the Fischer-Tropsch wax nor the treating amount of silicone oil on the silica. Hashimoto was discussed in the last Office action concerning melting points of Fischer-Tropsch waxes and that discussion is applicable here (see p. 5 of the last Office action). Hashimoto was also discussed as disclosing useful silicone oil treatment amounts when making silica external additives hydrophobic (see p. 6 of the last Office action).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the Fischer-Tropsch wax of Hashimoto in the invention of Arai because Arai exemplifies the usefulness of Fischer-Tropsch waxes and Hashimoto discloses that Fischer-Tropsch waxes having melting points between 45 and 90 °C are effective in magnetic toners where offset prevention is desired (col. 31, l. 58 – col. 32, l. 11). This feature is

specifically called for in Aria for the wax. Thus there is nexus between the needs of the Fischer-Tropsch wax in the primary reference and the Fischer-Tropsch wax in the supporting reference, and there is ample motivation for the combination rejection.

The artisan would also have found it obvious to treat the hydrophobic silica with silicone oil in amounts of 1 to 23 parts by weight per 100 parts of silica because Arai exemplifies a silicone oil treated silica and given the use of 1.0 parts by weight of silica the artisan would use 0.01 to 0.23 parts by weight of silicone oil with respect to the toner. This equates to a value of about 0.01 to 0.23 % of silicone oil as provided on the silicone oil treated toner.

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arai in US Patent Publication 2001/0053491 as applied to claims 2, 3, 5, and 7 above, and further in view of JP 3-125157.

Arai was discussed above. This reference does not disclose the combination of inorganic fine particles of claims 9-11. The JP reference was discussed in the last Office action on page 7 and that discussion is pertinent here.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the combination of positively and negatively charged silica in the invention of Arai because the JP reference teaches that such a combination eliminates decreased image density, fogging, and toner scattering.

Allowable Subject Matter

Claims 8 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher D RoDee whose telephone number is 703 308-2465. The examiner can normally be reached on most weekdays from 6 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 703 308-2464. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872-9310 for regular communications and 703 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0661.

cdr
August 2, 2003

CHRISTOPHER RODEE
PRIMARY EXAMINER